

## Claim Listing

Please enter the following claim listing showing claim amendments, which replaces all prior claim listings.

1-67 (Canceled)

68. (Currently amended) A method for classification of colon cancer present in an individual having contracted cancer comprising:

- i) determining, in a sample from the individual, ~~having contracted cancer~~ determining the microsatellite status of the ~~tumor~~ cancer and the hereditary or sporadic nature of said cancer from one or more patterns formed by the presence or amount of
- ~~(ii) in a sample from the individual having contracted cancer, said sample comprising a plurality of gene expression products ~~the presence or amount of which forms a pattern,~~ determining from said pattern a prognostic marker, wherein the microsatellite status and the prognostic marker is determined simultaneously or sequentially~~
- wherein at least one of said gene expression products used to determine said hereditary or sporadic nature is expressed by a gene in Table 13 corresponding to SEQ ID NOs. 105-114; and
- ~~(iii)~~ (ii) classifying said colon cancer from the microsatellite status and the ~~prognostic marker~~ hereditary or sporadic nature of said cancer.

69. (Canceled)

70. (Currently amended) The method of claim 68, wherein the determination of the microsatellite status ~~comprises further includes the steps of in a sample from the individual having contracted colon cancer, said sample comprising a plurality of gene expression products the presence or amount of which forms a pattern that is indicative of the microsatellite status of said cancer,~~

- i) determining the presence or amount of said a plurality of gene expression products forming said a microsatellite pattern, wherein at least one of said gene expression products is expressed by a gene in Table 1 corresponding to SEQ ID NOs: 1-104 and 115-135, and from the microsatellite pattern, ~~(iii)~~ obtaining an indication of the microsatellite status of said colon cancer in the individual based on step (ii).

71. (Canceled)

72. (Currently Amended) The method of claim 68, wherein a said plurality of gene expression products are analyzed ~~analysed~~ using a solid support, having binding partners or (hybridization ~~hybridisation~~ partners) for said plurality of gene expression products ~~forming a pattern~~.

73. (Currently Amended) The method of claim ~~68~~ 70, wherein a said plurality of gene expression products are ~~analyzed~~ analysed using binding partners or (~~hybridization~~ hybridisation partners) for said plurality of gene expression products ~~forming a pattern~~.

74. (Currently amended) The method of claim ~~68~~ 70, wherein at least two of said plurality of gene expression products forming a ~~the microsatellite~~ pattern ~~are~~ and used to determine said microsatellite status are selected ~~individually~~ from a group of genes indicative of microsatellite status.

75. (Currently amended) The method of claim 68, wherein at least two of said plurality of gene expression products used to determine the hereditary or sporadic nature of said colon cancer are selected ~~individually~~ from a group of genes indicative of ~~for~~ the hereditary or sporadic nature of the cancer.

76. (Currently amended) The method of claim 68 or 70, wherein at least two of said plurality of gene expression products forming a ~~the microsatellite~~ pattern used to determine said microsatellite status are selected ~~individually~~ from the group consisting of the genes listed in Table 1 corresponding to SEQ ID NOs: 1-104 and 115-135.

77. (Currently amended) The method of claim 68 or 70, wherein at least two of said plurality of gene expression products forming a ~~the microsatellite~~ pattern used to determine said microsatellite status are selected ~~individually~~ from the group consisting of the genes listed in Table 17 corresponding to SEQ ID NOs: 11, 23, 35, 43, 57, 89, 102-104 and 124.

78. (Canceled)

79. (Currently Amended) The method of claim 68 or 70, wherein

- i) at least one of said plurality of gene expression products forming a the microsatellite pattern used to determine said microsatellite status is selected from the group of genes that are down regulated in MSS colon cancers compared to MSI colon cancers consisting of genes corresponding to SEQ ID NOs: 11, 23, 35 and 43 and
- ii) at least one of said plurality of gene expression products forming the microsatellite pattern used to determine said microsatellite status is selected from the group of genes that are up regulated in MSS colon cancers compared to MSI colon cancers consisting of genes corresponding to SEQ ID NOs: 57, 89, 124 and 102-104.

80. (Previously Presented) The method of claim 79, wherein the difference in the level of gene expression products forming a pattern is at least one-fold.

81. (Currently Amended) The method of claim 79, wherein the difference in the level of gene expression products forming a the microsatellite pattern is at least 1.5 fold.

82. (Canceled)

83. (Previously presented) The method of claim 68, wherein at least two of said plurality of gene expression products forming a pattern used to determine said hereditary or sporadic nature of colon cancer are the two genes corresponding to SEQ ID NOs: 106 and 107.

84. (Currently amended) The method of claim 68 or 70, wherein the microsatellite status in an individual having contracted colon cancer is microsatellite instable.

85. (Previously presented) The method of claim 68, wherein said colon cancer is of Duke's B or Duke's C stage.

86. (Previously presented) The method of claim 68 wherein said colon cancer is an adenocarcinoma, a carcinoma, a teratoma, a sarcoma or a lymphoma.

87. (Previously presented) The method of claim 68, wherein the sample is a tissue biopsy of said tumor.

88. (Previously presented) The method of claim 87, wherein the sample is a cell suspension made from the tissue biopsy.

89. (Currently Amended) The method of claim 68, wherein the expression level is determined by determining mRNA ~~of~~ in the sample.

90. (Previously presented) The method of claim 68, wherein the expression level is determined by determining expression products in the sample.

91. (Previously presented) The method of claim 90, wherein said expression products are peptides or proteins.

92. (Currently Amended) The method of claim 68, wherein the microsatellite status of the colon cancer in an individual ~~has been~~ is determined by other methods, prior to the determination of the presence or amount of gene expression products forming an expression pattern indicative of microsatellite status using the genes in Table 1 or Table 17.

93. (Previously presented) The method of claim 68, wherein the sporadic or hereditary nature of a colon cancer has been determined prior to the determination of the presence or amount of gene expression products.

94. (Currently amended) A method for classification of colon cancer in an individual having contracted colon cancer, comprising:

- i) determining ~~wherein the microsatellite status is determined by a method comprising the steps of~~
- ii) in a sample from the individual ~~having contracted cancer, said sample comprising a~~ by analyzing a pattern formed by a plurality of gene expression products the presence or amount of a plurality of gene expression products, which forms a said pattern being that is indicative of the microsatellite status of said colon cancer, and

- (ii) determining the presence or amount of said gene expression products forming said pattern, wherein at least one of said gene expression products is expressed by a gene in Table 17 corresponding to SEQ ID NOs: 11, 23, 35, 43, 57, 89, 124 and 102-104, and
- ii) ~~(iii) obtaining an indication of~~ classifying the colon cancer based on the microsatellite status of said cancer in the individual ~~based on step ii).~~

95. (Currently amended) A method for classification of colon cancer in an individual having contracted colon cancer, comprising: wherein (i) determining the hereditary or sporadic nature of the cancer is ~~determined by a method comprising the steps of~~

- i) in a sample from the individual ~~having contracted cancer, said sample comprising by~~ analyzing a pattern formed by a plurality of gene expression products the presence or amount of a plurality of gene expression products, which forms a said pattern that is being indicative of the hereditary or sporadic nature of said colon cancer,
- (ii) determining the presence and/or amount of said gene expression products forming said pattern, wherein at least one of said gene expression products is expressed by a gene in Table 13 corresponding to SEQ ID NOs. 105-114, and (iii) ~~obtaining an indication of~~ (iii) classifying the colon cancer based on the hereditary or sporadic nature of said colon cancer in the individual ~~based on step ii).~~

96. (Currently Amended) The method of claim 95, wherein the microsatellite status of said colon cancer is determined simultaneously or sequentially therewith.

97. (Currently amended) A method for treatment of an individual having contracted colon cancer comprising the steps of

- i) selecting an individual having contracted a colon cancer, ~~wherein the~~ whose microsatellite status is stable and is determined according to the method of claim 68; and
- ii) treating the individual with an anti cancer drug.

98. (Currently amended) The method of claim 97, wherein the anti cancer drug is a fluorouracil-based ~~drugs~~ drug.

99. (Previously presented) The method of claim 98, wherein the anti cancer drug is selected from the group consisting of 5-fluorouracil, N-methy-N'-nitro-N-nitrosoguanidine and 6-thioguanine.

100. (Previously presented) The method of claim 97, wherein the anti cancer drug is a non-fluorouracil based drug.

101. (Previously presented) The method of claim 100, wherein the anti cancer drug is selected from the group consisting of leucovorin, irinotecan, oxaliplatin and cetuximab.

102. (Currently amended) A method for treatment of an individual having contracted colon cancer comprising the steps of

- i) selecting an individual having contracted a colon cancer, ~~wherein the~~ whose microsatellite status is instable and is determined according to the method of claim 68; and
- ii) treating the individual with an anti cancer drug.

103. (Currently amended) The method of claim ~~97~~ 102, wherein the anti cancer drug is camptothecin or irinotecan.

104. (Currently amended) The method of claim 97 or 102, wherein the microsatellite status has been determined by a process selected from the group ~~consisting~~ consisting of microsatellite analysis, ELISA, antibody-based histochemical staining and immune histo chemistry.

105. (Currently amended) The method of claim ~~97~~ 102, wherein the sporadic or hereditary nature of the microsatellite instable colon cancer has been examined prior to determining the sporadic or hereditary nature of said colon cancer by analyzing gene expression products ~~forming a pattern~~ indicative of said hereditary or sporadic nature.

106. (Currently amended) The method of claim ~~97~~ 102, wherein the sporadic or hereditary nature of the microsatellite instable colon cancer has been examined by histological examination of the sample.

107. (Currently amended) The method of claim ~~97~~ 102, wherein the sporadic or hereditary nature of the microsatellite instable colon cancer has been examined by genotyping the sample.

108-120. (Canceled)

121. (Currently amended) A method for treatment of an individual having contracted colon cancer comprising the steps of

- i) selecting an individual having contracted a colon cancer, ~~wherein the~~ whose microsatellite status is stable and is determined according to the method of claim 68 and wherein the hereditary or sporadic nature of said cancer has been determined according to the method of claim 68, and
- ii) introducing at least one gene into the tumor cell in a manner allowing expression of said gene(s).

122. (Currently Amended) The method of claim 121, wherein at least one gene is selected from a gene corresponding to SEQ ID NOs: 107 and 136-139 which are genes MLH1, MSH2, PMS1, PMS2, MSH6 .

123. (Previously presented) The method of claim 121, wherein at least two different genes are introduced.

124-127 (Canceled)

128. (Currently amended) Use of the method of claim 68 for producing an assay classifying colon cancer in ~~animal~~ tissue obtained from an individual having contracted colon cancer.

129-135 (Canceled)